

This Page Is Inserted by IFW Operations  
and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

## **IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning documents *will not* correct images,  
please do not report the images to the  
Image Problem Mailbox.**

(c)1998 Derwent Info Ltd. All rts. reserv.

010766197     \*\*Image available\*\*

WPI Acc No: 96-263151/199627

Decorative board - has antibacterial, insectifuge sheet plastered on base board surface

Patent Assignee: MI KK (MIMI-N)

Number of Countries: 001    Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Main IPC	Week
JP 8108403	A	19960430	JP 94274534	A	19941013	B27D-005/00	199627 B

Priority Applications (No Type Date): JP 94274534 A 19941013

Patent Details:

Patent	Kind	Lan	Pg	Filing Notes	Application	Patent
JP 8108403	A		4			

Abstract (Basic): JP 8108403 A

Board has antibacterial, insectifuge sheet (12) contg. an antibacterial insectifuge (12a) plastered on the surface of a base board (11). A facing material (13) is pref. further plastered on the antibacterial insectifuge sheet (12). As the antibacterial insectifuge sheet (12), a paper or a non-woven fabric contg. the antibacterial insectifuge (12a) is pref. employed.

USE/ADVANTAGE - The board repels termites and controls moulds, acarids and cockroaches. As the antibacterial insectifuge sheet is coated with a facial material, the antibacterial effect remains for a long time and the effect of the sheet on babies or pets is decreased. When the base material is made of plywood and the facing material is made of a wood veneer, by the user of the paper or non-woven fabric for the antibacterial insectifuge sheet, the facing material is protected from cracking in the fibre direction even when the base plate expands or contracts.

Dwg.1,2/2

Derwent Class: C07; D22; F09; P63; P73

International Patent Class (Main): B27D-005/00

International Patent Class (Additional): A01N-025/34; B27M-003/00; B32B-021/06; B32B-021/10

TRANSLATION OF  
JAPANESE KOKAI NO. 08/108403

IN THE NAME OF

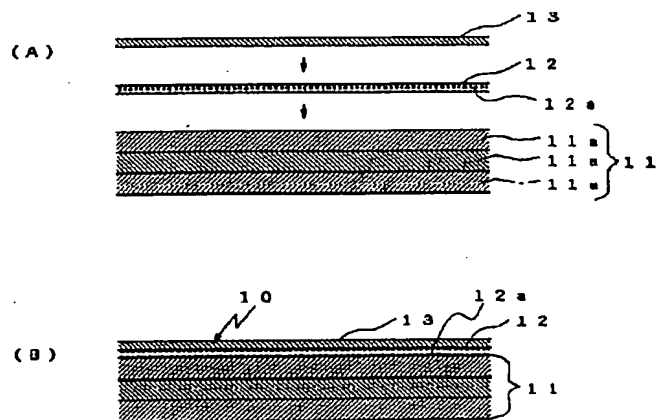
MI KK

[Title of the Invention] Decorative Laminated Sheet

[Summary]

[Object] To render possible easy production of a decorative laminated sheet in which a surface decorative material comprised of a surface decorative veneer is adhered to the surface of a board composed of a laminated wood, which does not cause crazes on the surface decorative veneer and to which antimicrobial and insecticidal properties can be added easily so that the decorative laminated sheet can show stable antimicrobial and insecticidal effects for a prolonged period of time.

[Construction] In this decorative laminated sheet, an antimicrobial insect proof sheet 12 containing an antimicrobial insecticide 12a was adhered to the surface of a board 11, a surface decorative material 13 was adhered to the surface of the antimicrobial insect proof sheet 12 as occasion demands, and a material composed of paper or non-woven fabric was used in the antimicrobial insect proof sheet 12.



[Claim]

1. A decorative laminated sheet in which an antimicrobial insect proof sheet 12 containing an antimicrobial insecticide 12a is adhered to the surface of a board 11.

2. The decorative laminated sheet according to claim 1 wherein a surface decorative material 13 is adhered to the surface of the aforementioned antimicrobial insect proof sheet 12.

3. The decorative laminated sheet according to claim 1 or 2 wherein paper or non-woven fabric impregnated with an antimicrobial insecticide 12a is used as the aforementioned antimicrobial insect proof sheet 12.

[Detailed Description of the Invention]

[Field of the Invention] This invention relates to decorative laminated sheets, particularly to an antimicrobial decorative laminated sheet which can inhibit formation of worm holes caused by termites and generation of ticks, cockroaches, fungi and the like and also does not cause crazes on its surface decorative veneer even when the surface decorative veneer is adhered to the surface of its board composed of a laminated wood.

[Prior Art] In the prior art, those in which surface decorative veneer and the like surface decorative materials are adhered on the surface of boards composed of laminated wood and the like are generally used as decorative laminated sheets in floor boards, wall boards and the like.

In such a case in which a surface decorative material composed of a surface decorative veneer is adhered to the surface of a board made of a laminated wood, crazes are formed in the fiber direction of the surface decorative veneer due to swelling and contraction of

the laminated wood surface when the fiber direction of the laminated wood surface is in parallel with the fiber direction of the surface decorative veneer, so that such a problem of causing generation of crazes in the surface decorative veneer is serious particularly in recent years of the frequent use of fan heaters, heating carpets and the like.

Thus, in order to prevent cracking in the surface decorative veneer, adhesion of paper between the board and the surface decorative veneer has been carried out in the prior art.

In addition, great concern has been directed in recent years toward the inhibition of the formation of worm holes caused by termites and generation of ticks, cockroaches, fungi and the like in the aforementioned decorative laminated sheets.

Because of this, measures have been taken in the prior art for example by adding an antimicrobial agent or an insecticide to an adhesive agent to be used in adhering a surface decorative material to the surface of a board, or by adhering a surface decorative material to the surface of a board and then coating a paint containing an antimicrobial agent or an insecticide on the surface decorative material.

However, it is troublesome to carry out the aforementioned measures in which a surface decorative material is adhered to the surface of a board using an adhesive agent to which an antimicrobial agent or an insecticide is added, or an antimicrobial agent or an insecticide is added to a paint and coated on the surface decorative material adhered to the surface of the board, in addition to the arrangement of paper between the board and the surface decorative veneer in order to prevent cracking in the surface decorative veneer, thus causing a problem of poor

workability.

Also, when an antimicrobial agent or insecticide is added to a paint or an adhesive agent, it is difficult to effect uniform dispersion of the antimicrobial agent or insecticide in the paint or adhesive agent, which causes another problem in that a decorative laminated sheet having totally uniform and sufficient antimicrobial and insecticidal effects cannot be obtained easily.

In addition, when a paint to which an antimicrobial agent or insecticide is added is coated on a surface decorative material which is adhered to the surface of a board, the antimicrobial agent or insecticide is exposed on the surface of the resulting decorative laminated sheet, so that stable antimicrobial and insecticidal actions cannot be obtained for a prolonged period of time because of premature reduction of the antimicrobial and insecticidal effects. In addition, a danger of exerting adverse influences upon babies, pets and the like may be caused.

[Problems to be resolved by the Invention] The present invention contemplates overcoming the aforementioned various problems involved in the decorative laminated sheets which are used as floor boards, wall boards and the like.

Thus, the object of the present invention is to render possible easy production of the aforementioned decorative laminated sheet in which a surface decorative material comprising a surface decorative veneer is adhered to the surface of a board composed of a laminated wood, which does not cause crazes on the surface decorative veneer and to which antimicrobial and insecticidal properties can be added easily so that the decorative laminated sheet can show stable antimicrobial and insecticidal effects for a

prolonged period of time.

[Means for resolving the Problems] In the decorative laminated sheet of the present invention, in order to resolve the aforementioned problems, an antimicrobial insect proof sheet 12 containing an antimicrobial insecticide 12a is adhered to the surface of a board 11 and, as occasion demands, a surface decorative material 13 is adhered to the surface of the antimicrobial insect proof sheet 12.

As the just described board 11, conventionally used laminated woods, as well as medium quality fiber boards, particle boards and the like wood board materials, can be used.

With regard to the antimicrobial insect proof sheet 12 to be adhered to the surface of the board 11, paper, non-woven fabric, a resin film or the like sheet material which is impregnated with an antimicrobial insecticide 12a can be used. As the antimicrobial insecticide 12a, it is desirable to use an agent which has excellent antimicrobial activity against fungi and the like microorganisms and also has excellent insecticidal activity against termites, ticks, cockroaches and the like.

Examples of the surface decorative material 13 to be adhered to the surface of the antimicrobial insect proof sheet 12 include a woody surface decorative veneer and a resinous decorative sheet.

In this connection, when a woody surface decorative veneer is used as the surface decorative material 13, it is desirable to use a sheet material composed of paper or non-woven fabric in the aforementioned antimicrobial insect proof sheet 12, in order to prevent generation of cracks in the surface decorative veneer, and it is more desirable from the production cost, production



efficiency and like points of view to use an antimicrobial insect proof sheet 12 made of paper which is produced by mixing the antimicrobial insecticide 12a.

[Actions] According to the decorative laminated sheet of the present invention, an antimicrobial insect proof sheet 12 containing an antimicrobial insecticide 12a is adhered to the surface of a board 11 composed of a laminated wood or the like as described in the foregoing, so that generation and growth of fungi and the like microorganisms can be inhibited due to the antimicrobial property against fungi and the like microorganisms provided by the antimicrobial insect proof sheet 12 which also is capable of inhibiting formation of worm holes caused by termites and generation of ticks, cockroaches and the like.

Also, when such an antimicrobial insect proof sheet 12 which is impregnated with an antimicrobial insecticide 12a is used, insufficient and biased dispersion of antimicrobial and insecticidal agents, which is observed in the case of the addition of antimicrobial and insecticidal agents to paints or adhesive agents, does not occur, so that dispersion of the antimicrobial insecticide 12a in the antimicrobial insect proof sheet 12 can be made easily and a decorative laminated sheet having totally uniform and sufficient antimicrobial and insecticidal effects can be obtained.

Also, when an antimicrobial insect proof sheet 12 which is impregnated with an antimicrobial insecticide 12a is adhered to the surface of a board 11 as described above and a surface decorative material 13 is further adhered to the surface of the antimicrobial insect proof sheet 12, the antimicrobial insect proof sheet 12

containing the antimicrobial insecticide 12a is not exposed to the surface of the resulting decorative laminated sheet, so that the aforementioned antimicrobial effects exerted by the antimicrobial insecticide 12a can be obtained stably for a prolonged period of time, and the influence of the decorative laminated sheet upon babies, pets and the like becomes less when used in floor boards and the like.

In addition, when a sheet material made of paper or non-woven fabric is used as the aforementioned antimicrobial insect proof sheet 12 in a case in which a laminated wood is used in the aforementioned board 11 and a woody surface decorative veneer is used in the surface decorative material 13, generation of crazes in the fiber direction of the surface decorative veneer adhered to the surface of the laminated wood board 11 does not occur by the swelling and contraction of the board 11, so that a decorative laminated sheet which has sufficient antimicrobial property and does not generate crazes in the surface decorative veneer can be obtained.

[Examples] The following illustratively describes an example of the decorative laminated sheet of the present invention with reference to the drawings attached hereto.

As shown in Fig. 1 (A) and (B) and Fig. 2, a laminated wood in which a plurality of veneers 11a were laminated was used as the board 11 in the decorative laminated sheet 10 of this example.

With regard to the antimicrobial insecticide 12a-containing antimicrobial insect proof sheet 12 to be adhered to the surface of this laminated wood board 11, an antimicrobial insect proof sheet 12 made of paper produced by adding the antimicrobial insecticide

12a was used, and the antimicrobial insect proof sheet 12 made of paper was adhered to the surface of the aforementioned board 11.

After adhesion of the antimicrobial insect proof sheet 12 made of paper to the surface of the board 11 in this way, a surface decorative material 13 was adhered to the surface of the antimicrobial insect proof sheet 12. In the decorative laminated sheet 10 of this example, a woody surface decorative veneer 13 produced by combining and adhering a plurality of veneers 13a was used as the aforementioned surface decorative material 13 to be adhered.

After adhesion of the antimicrobial insect proof sheet 12 and the surface decorative veneer 13 in that order to the surface of the laminated wood board 11, the peripheral surface was processed to obtain a decorative laminated sheet 10 for floor board use.

Since the antimicrobial insect proof sheet 12 made of paper containing the antimicrobial insecticide 12a was arranged between the laminated wood board 11 and the woody surface decorative veneer 13 in the thus obtained decorative laminated sheet 10 of this example, inhibition of the generation and growth of fungi and the like microorganisms became possible due to the antimicrobial property against fungi and the like microorganisms provided by the antimicrobial insect proof sheet 12 which also was capable of inhibiting formation of worm holes caused by termites and generation of ticks, cockroaches and the like. The aforementioned antimicrobial and insecticidal effects of the decorative laminated sheet 10 also became stable for a prolonged period of time in comparison with a case in which a paint containing antimicrobial and insecticidal agents was coated on the surface decorative veneer 13. And the decorative laminated sheet 10 was able to exert totally

uniform and sufficient antimicrobial and insecticidal effects as the result of the uniform dispersion of the antimicrobial insecticide 12a in the antimicrobial insect proof sheet 12.

Also, since the antimicrobial insect proof sheet 12 made of paper was adhered between the surface of the laminated wood board 11 and the woody surface decorative veneer 13 in the decorative laminated sheet 10 of this example, it was able to prevent cracking of the surface decorative veneer 13 in its fiber direction caused by the swelling and contraction on the surface of the board 11-constructing laminated wood, thus rendering possible production of a decorative laminated sheet 10 free from the generation of crazes and the like in the surface decorative veneer 13.

Though a case of decorative laminated sheet 10 for floor board use is shown in this example, it is possible to use it as wall board and the like, and not only the aforementioned laminated wood but also a medium quality fiber board, particle board or the like woody board material can be used as the material of the board 11.

When such a medium quality fiber board, particle board or the like material is used in the board 11, the board 11 does not show directional changes in its contraction and swelling, so that generation of crazes and the like in the surface decorative veneer 13 does not occur even when a resin sheet or the like is used as the sheet material of the aforementioned antimicrobial insect proof sheet 12.

In addition, though a woody surface decorative veneer 13 was used as the surface decorative material 13 and adhered to the surface of the antimicrobial insect proof sheet 12 which was adhered to the surface of the board 11 in the decorative laminated sheet 10 of this example, it is possible to adhere a surface

decorative material 13 composed of a resin or the like, and it is possible also to cancel arrangement of the surface decorative material 13 by making a pattern or the like on the surface of the antimicrobial insect proof sheet 12.

[Effects of the Invention] As has been described in detail in the foregoing, according to the decorative laminated sheet of the present invention, an antimicrobial insect proof sheet impregnated with an antimicrobial insecticide is adhered to the surface of a board composed of a laminated wood or the like, so that the antimicrobial insecticide is uniformly dispersed in the antimicrobial insect proof sheet without causing insufficient and biased dispersion of the antimicrobial and insecticidal agents which is observed in the prior art case in which antimicrobial and insecticidal agents are added to paints or adhesive agents, thus rendering possible production of a decorative laminated sheet having totally uniform and sufficient antimicrobial and insecticidal effects, which can stably inhibit generation and growth of fungi and the like microorganisms, formation of worm holes caused by termites and generation of ticks, cockroaches and the like.

Also, when the antimicrobial insect proof sheet impregnated with an antimicrobial insecticide is adhered to the surface of the board as described above and a surface decorative material is further adhered to the surface of the antimicrobial insect proof sheet, the antimicrobial insect proof sheet impregnated with the antimicrobial insecticide is not exposed to the surface of the resulting decorative laminated sheet, so that the antimicrobial effects exerted by the antimicrobial insecticide can be obtained

stably for a prolonged period of time, and the influence of the decorative laminated sheet upon babies, pets and the like becomes less when used in floor boards and the like.

In addition, when a sheet material made of paper or non-woven fabric is used as the antimicrobial insect proof sheet in a case in which a laminated wood is used in the aforementioned board and a woody surface decorative veneer is used in the surface decorative material, generation of cracks in the fiber direction of the surface decorative veneer adhered to the surface of the board of laminated wood does not occur by the swelling and contraction of the board, so that a decorative laminated sheet which has sufficient antimicrobial property and does not generate crazes in the surface decorative veneer can be obtained.

[Brief Description of the Drawings]

Fig. 1 is a schematic section view showing steps for the production of the decorative laminated sheet of the example of the present invention.

Fig. 2 is a schematic perspective view of the decorative laminated sheet of the example of the present invention.

[Description of Symbols]

- 10 Decorative laminated sheet
- 11 Board
- 12 Antimicrobial insect proof sheet
- 12a Antimicrobial insecticide
- 13 Surface decorative material (surface decorative veneer)

Fig. 1

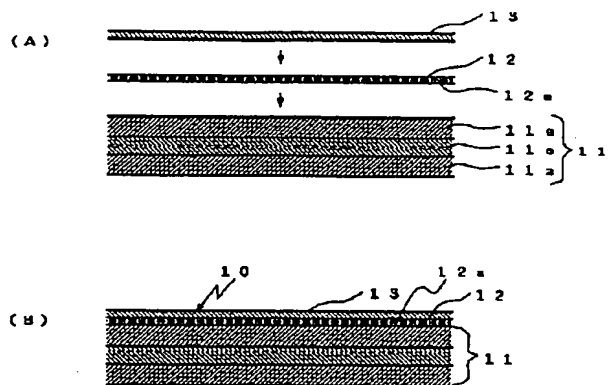
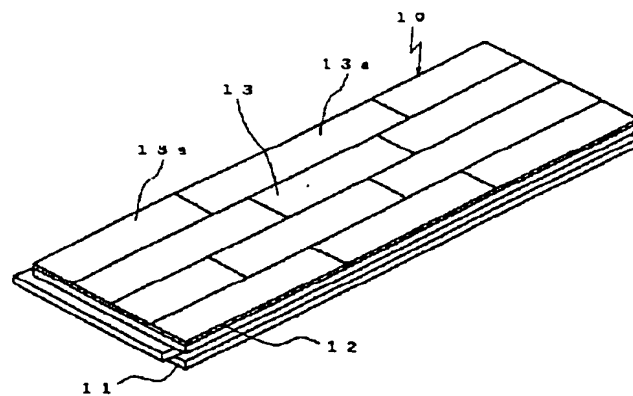


Fig. 2



(19)日本国特許庁 (J P)

(12) 公 開 特 許 公 報 (A)

(11)特許出願公開番号

特開平8-108403

(43)公開日 平成8年(1996)4月30日

(51)Int.Cl. <sup>9</sup>	識別記号	序内整理番号	F I	技術表示箇所
B 2 7 D 5/00				
A 0 1 N 25/34	A			
B 2 7 M 3/00	N	9123-2B		
B 3 2 B 21/06				
21/10				

審査請求 未請求 請求項の数 3 F D (全 4 頁)

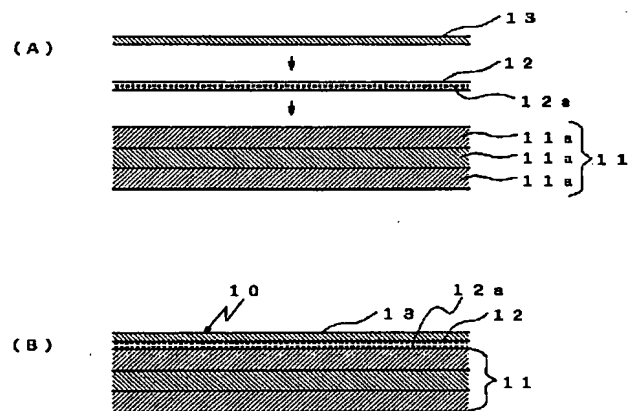
(21)出願番号	特願平6-274534	(71)出願人	594184632 株式会社エムアイ 大阪府堺市甲斐町西1丁1番22号 若林ビル302号
(22)出願日	平成6年(1994)10月13日	(72)発明者	池田 豊 大阪府堺市甲斐町西1丁1番22号 若林ビル302号 株式会社エムアイ内
		(74)代理人	弁理士 松川 克明

(54)【発明の名称】 化粧板

(57)【要約】

【目的】 合板で構成された基板の表面に表面化粧単板からなる表面化粧材を貼着させた場合に、この表面化粧単板に干割れが生じたりすることがなく、またこの化粧板に対して抗菌防虫性の付与が簡単に行え、長期に渡って安定した抗菌防虫効果を有する化粧板が簡単に得られるようにする。

【構成】 この化粧板においては、基板11の表面に抗菌性防虫剤12aが含有された抗菌性防虫シート12を貼着させ、必要に応じて、この抗菌性防虫シート12上に表面化粧材13を貼着させたり、またこの抗菌性防虫シート12に紙や不織布で構成されたものを用いるようにした。





## 【特許請求の範囲】

【請求項1】 基板11の表面に抗菌性防虫剤12aが含有された抗菌性防虫シート12が貼着されてなることを特徴とする化粧板。

【請求項2】 請求項1に記載した化粧板において、上記抗菌性防虫シート12上に表面化粧材13が貼着されてなることを特徴とする化粧板。

【請求項3】 請求項1又は2に記載した化粧板において、上記抗菌性防虫シート12として、紙又は不織布に抗菌性防虫剤12aを含有させたものを用いたことを特徴とする化粧板。

## 【発明の詳細な説明】

## 【0001】

【産業上の利用分野】この発明は、床板や壁板等に使用される化粧板に係り、特に、白蟻による虫喰いやダニ、ゴキブリ、カビ等の発生を効果的に抑制できると共に、合板で構成された基板の表面に表面化粧単板を貼着させた場合においても、表面化粧単板に干割れが生じたりすることがない抗菌性の化粧板に関するものである。

## 【0002】

【従来の技術】従来において、床板や壁板等に使用する化粧板としては、合板等で構成された基板の表面に表面化粧単板等の表面化粧材を貼着させたものが一般に使用されていた。

【0003】ここで、合板からなる基板の表面に表面化粧単板からなる表面化粧材を貼着させた場合、合板表面の繊維方向と表面化粧単板の繊維方向が平行であると、合板表面の膨張、収縮によって表面化粧単板の繊維方向に干割れが生じ、特に、ファンヒーターや暖房カーペット等が多く使用される近年においては、このような表面化粧単板における干割れの発生がひどいという問題があった。

【0004】そこで、従来においては、表面化粧単板に割れが生じるのを防止するため、基板と表面化粧単板との間に紙を貼着させることが行われていた。

【0005】また、近年においては、上記のような化粧板において、白蟻による虫喰いやダニ、ゴキブリ、カビ等の発生を抑制することが要望されるようになった。

【0006】このため、従来においては、基板の表面に表面化粧材を貼着させるのに使用する接着剤に抗菌剤や防虫剤を添加させたり、基板の表面に表面化粧材を貼着した後、この表面化粧材に抗菌剤や防虫剤を添加させた塗料を塗布するということが行われていた。

【0007】しかし、上記のように表面化粧単板における割れを防止するために、紙を基板と表面化粧単板との間に設ける他に、これとは別に接着剤に抗菌剤や防虫剤を添加させて表面化粧材を基板の表面に貼着させたり、塗料に抗菌剤や防虫剤を添加して基板の表面に貼着された表面化粧材に塗布させたりすることは面倒であり、作業性が悪いという問題があった。

【0008】また、抗菌剤や防虫剤を塗料や接着剤に添加させる場合、抗菌剤や防虫剤を塗料や接着剤に均一に分散させることが困難であり、全体に均一で十分な抗菌防虫効果を有する化粧板が得られにくいという問題があった。

【0009】さらに、基板の表面に貼着された表面化粧材の上に抗菌剤や防虫剤が添加された塗料を塗布するようにした場合、抗菌剤や防虫剤が化粧板の表面に露出するため、その抗菌防虫効果の低下が早くなって、長期に渡って安定した抗菌防虫作用が得られなかったり、また表面板を床板として使用した場合には、赤ん坊やペット等に悪影響を及ぼすおそれもあった。

## 【0010】

【発明が解決しようとする課題】この発明は、床板や壁板等として使用される化粧板における上記のような様々な問題を解決することを課題とするものである。

【0011】すなわち、この発明においては、上記のような化粧板において、合板で構成された基板の表面に表面化粧単板からなる表面化粧材を貼着させた場合に、この表面化粧単板に干割れが生じたりすることがなく、またこの化粧板に対する抗菌防虫性の付与が簡単に行え、長期に渡って安定した抗菌防虫効果を有する化粧板が簡単に得られるようにすることを課題とするものである。

## 【0012】

【課題を解決するための手段】この発明における化粧板においては、上記のような課題を解決するため、基板11の表面に抗菌性防虫剤12aが含有された抗菌性防虫シート12を貼着させるようにし、また必要に応じて、この抗菌性防虫シート12上に表面化粧材13を貼着させるようにしたのである。

【0013】ここで、上記の基板11としては、一般に使用されている合板の他に、中質繊維板やパーティクルボード等の木質系板材を使用することができる。

【0014】また、この基板11の表面に貼着させる抗菌性防虫シート12としては、紙や不織布や樹脂フィルム等のシート材に抗菌性防虫剤12aを含有させたものを使用することができ、含有させる抗菌性防虫剤12aとしては、カビ等の菌に対する抗菌性に優れると共に、白蟻、ダニ、ゴキブリ等に対して優れた防虫作用を有するものを用いることが好ましい。

【0015】また、抗菌性防虫シート12上に貼着させる表面化粧材13としては、木質系の表面化粧単板や樹脂等で構成された化粧シート等を使用することができ

る。

【0016】ここで、この表面化粧材13として木質系の表面化粧単板を使用する場合、この表面化粧単板における割れの発生を防止するために、上記の抗菌性防虫シート12には、そのシート材が紙や不織布で構成されたものを用いるようにすることが好ましく、特に、製造コストや生産効率等の点から、抗菌性防虫剤12aを混合

させて抄紙した紙製の抗菌性防虫シート12を用いるようにすることが好ましい。

【0017】

【作用】この発明における化粧板においては、上記のように合板等で構成された基板11の表面に抗菌性防虫剤12aが含有された抗菌性防虫シート12を貼着させるようにしたため、この抗菌性防虫シート12により、カビ等の菌に対する抗菌性が付与されてカビ等の菌の発生や増殖が抑制されると共に、白蟻による虫喰いや、ダニ、ゴキブリ等の発生も抑制されるようになる。

【0018】また、このように抗菌性防虫剤12aが含有された抗菌性防虫シート12を使用する場合、抗菌剤や防虫剤塗料や接着剤に添加させる場合のように、抗菌剤や防虫剤が分散されずにかたよるということがなく、抗菌性防虫剤12aをこの抗菌性防虫シート12に均一に分散させることが簡単に行えて、全体に均一で十分な抗菌防虫効果を有する化粧板が得られるようになる。

【0019】更に、上記のように基板11の表面に抗菌性防虫剤12aが含有された抗菌性防虫シート12を貼着させた後、更にこの抗菌性防虫シート12の上に表面化粧材13を貼着させると、抗菌性防虫剤12aが含有された抗菌性防虫シート12が化粧板の表面に露出するということがなく、上記の抗菌性防虫剤12aによる抗菌効果が長期に渡って安定して得られると共に、この化粧板を床板等に使用した場合において、赤ん坊やペット等に及ぼす影響も少なくなる。

【0020】また、上記の基板11に合板を使用すると共に表面化粧材13に木質系の表面化粧単板を使用した場合、上記の抗菌性防虫シート12として、そのシート材が紙や不織布で構成されたものを使用すると、合板からなる基板11の膨張、収縮によってこの表面に貼着された表面化粧単板に繊維方向の割れが生じることがなくなり、十分な抗菌性を有すると共に表面化粧単板に干割れが生じることがない化粧板が得られるようになる。

【0021】

【実施例】以下、この発明の一実施例に係る化粧板を、添付図面に基いて具体的に説明する。

【0022】この実施例における化粧板10においては、図1の(A)、(B)及び図2に示すように、基板11として複数の単板11aが積層された合板を使用するようにした。

【0023】また、この合板からなる基板11の表面に貼着させる抗菌性防虫剤12aが含有された抗菌性防虫シート12としては、抗菌性防虫剤12aを加えて抄紙させた紙製の抗菌性防虫シート12を用いるようにし、この紙製の抗菌性防虫シート12を上記の基板11の表面に貼着させるようにした。

【0024】そして、このように基板11の表面に紙製の抗菌性防虫シート12を貼着させた後、この抗菌性防

虫シート12の表面に表面化粧材13を貼着させるようにした。ここで、この実施例における化粧板10においては、上記の表面化粧材13として、複数の単板13aが寄せ集められて接合された木質系の表面化粧単板13を貼着させるようにした。

【0025】このようにして合板からなる基板11の表面に抗菌性防虫シート12と表面化粧単板13とを順々に貼着させた後は、その周囲に実加工を施して床板用の化粧板10を得た。

10 【0026】ここで、このようにして得たこの実施例の化粧板10においては、合板からなる基板11と木質系の表面化粧単板13との間に抗菌性防虫剤12aが含有された紙製の抗菌性防虫シート12を設けたため、この抗菌性防虫シート12によりカビ等の菌に対する抗菌性が付与されてカビ等の菌の発生や増殖が抑制されると共に、白蟻による虫喰いや、ダニ、ゴキブリ等の発生も抑制されるようになり、またこの化粧板10における上記の抗菌防虫効果も、表面化粧単板13上に抗菌剤や防虫剤を添加した塗料を塗布した場合に比べて、長期に渡って安定した効果が得られるようになり、さらに抗菌性防虫剤12aが抗菌性防虫シート12に均一に分散される結果、化粧板10全体が均一で十分な抗菌防虫効果を奏するようになった。

20 【0027】また、この実施例における化粧板10においては、上記のように合板からなる基板11の表面と木質系の表面化粧単板13との間に紙製の抗菌性防虫シート12を貼着させるようにしたため、基板11を構成する合板の表面における膨張、収縮によって表面化粧単板13が繊維方向に割れるということが防止され、表面化粧単板13に干割れ等の発生がない化粧板10が得られるようになった。

30 【0028】なお、この実施例においては、床板用の化粧板10の例を示したが、壁板等として使用することも可能であり、また基板11の材料としては、上記のような合板の他に中質繊維板やパーティクルボード等の木質系板材を使用することができる。

40 【0029】また、このように基板11に中質繊維板やパーティクルボード等を使用した場合、この基板11における収縮、膨張の方向性がないため、上記の抗菌性防虫シート12におけるシート材に樹脂シート等を使用しても、表面化粧単板13における干割れ等の発生がない。

50 【0030】更に、この実施例における化粧板10においては、基板11の表面に貼着させた抗菌性防虫シート12の上に表面化粧材13として木質系の表面化粧単板13を貼着させるようにしたが、樹脂等で構成された表面化粧材13を貼着させることも可能であり、更には抗菌性防虫シート12の表面に模様等を附しておき、表面化粧材13を設けないようにすることも可能である。

【0031】

5

【発明の効果】以上詳述したように、この発明における化粧板においては、合板等で構成された基板の表面に抗菌性防虫剤が含有された抗菌性防虫シートを貼着させるようにしたため、抗菌剤や防虫剤を塗料や接着剤に添加させる場合のように抗菌剤や防虫剤が分散されずにかたよるということがなく、抗菌性防虫剤が抗菌性防虫シートに均一に分散されるようになり、全体に均一で十分な抗菌防虫効果を有する化粧板が得られ、カビ等の菌の発生や増殖及び白蟻による虫喰いや、ダニ、ゴキブリ等の発生も安定して抑制されるようになった。

【0032】また、上記のように基板の表面に抗菌性防虫剤が含有された抗菌性防虫シートを貼着させた後、更にこの抗菌性防虫シートの上に表面化粧材を貼着させるようにすると、抗菌性防虫剤が含有された抗菌性防虫シートが化粧板の表面に露出するということがなく、抗菌性防虫剤による抗菌効果が長期に渡って安定して得られると共に、この化粧板を床板等に使用した場合においても、赤ん坊やペット等に及ぼす影響が少なくなった。

【0033】さらに、上記の基板に合板を使用すると共

6

に表面化粧材に木質系の表面化粧単板を使用した場合において、シート材が紙や不織布で構成された抗菌性防虫シートを使用すると、合板からなる基板の膨張、収縮によってこの表面に貼着された表面化粧単板に繊維方向の割れが生じるということがなくなり、十分な抗菌防虫性を有すると共に表面化粧単板に干割れが生じるということがない化粧板が得られるようになった。

【図面の簡単な説明】

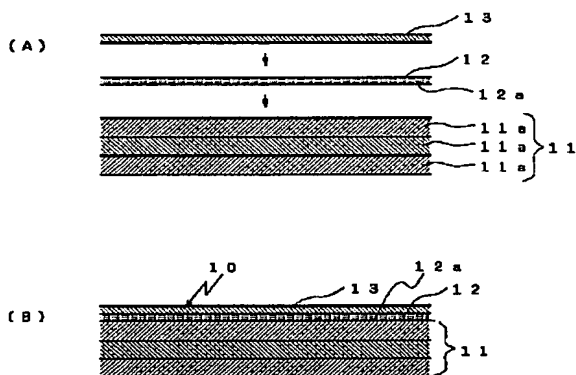
【図1】この発明の実施例に係る化粧板を製造する工程を示した概略断面図である。

【図2】この発明の実施例に係る化粧板の概略斜視図である。

【符号の説明】

- 10 化粧板
- 11 基板
- 12 抗菌性防虫シート
- 12a 抗菌性防虫剤
- 13 表面化粧材（表面化粧単板）

【図1】



【図2】

